

Application No. : 10/666,580
Filed : September 17, 2003

REMARKS

Claims 1-6, 10, 19-21 and 26-38 were pending in the application. By this paper, Applicant has amended Claims 1, 4, 5, 10, 19, 32, 36, and 37 and added new Claims 39 – 41. Hence, Claims 1 – 6, 10, 19 – 21 and 26 – 41 are presented for examination herein.

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Drawings

Per page 2 of the Office Action, the drawings were objected to under 37 CFR 1.83(a). Specifically, the Examiner asserts that the drawings do not show “*the second substantially insulating coating coats at least a portion of said device and at least a portion of said plurality of turns*”, etc. In response thereto, Applicant has herein added new drawing Fig. 16b to show the aforementioned limitations present in the claims. Applicant also herein submits amendments to the specification which describe the aforementioned newly added Fig. 16b. No new matter has been introduced by way of either of these amendments, as Fig. 16b and the related amendment to the specification are extracted directly from Fig. 3b and its accompanying disclosure from U.S. Pat. No. 6,642,827 entitled “Advanced Electronic Microminiature Coil and Method of Manufacturing” which was incorporated by reference in its entirety at time of filing at page 35, lines 13 – 16 in Applicants’ specification as filed.

Alternatively, at the Examiner’s discretion, the amendments and drawing (Fig. 16b) presented herein may not be entered, and the drawing rejection withdrawn (as this drawing already existed as Fig. 3b in U.S. Pat. No. 6,642,827, incorporated by reference as of the time the present application was filed).

In either event, Applicant submits that the Examiner’s objections cited above have been completely overcome.

25 §112 Rejections

Claim 5 – Per page 3 of the Office Action, the Examiner rejected Claim 5 requesting clarification of the structure/arrangement of the device relative to the conditions of the inductance characteristic. Applicant believes sufficient clarity already exists, namely that Claim 1 which recites, *inter alia*, “*said permeable element, core, and insulator cooperate to provide a desired inductance characteristic as a function of current.*” However, in the interest of furthering prosecution, Applicant has amended Claim 5 to include limitations “*wherein said*

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inductance characteristic comprises a first substantially discrete inductance value associated with a first condition which is substantially larger than a second substantially discrete value associated with a second condition, said first and second conditions being a function of DC current.” Support for the aforementioned amendment can be found, *inter alia*, at page 11, lines 5 14 – 21 of Applicant’s specification as filed.

Applicant believes that the aforementioned claim language provides sufficient structure/arrangement to overcome the Examiner’s 35 U.S.C. 112, second paragraph rejection.

Claim 19 – Per page 3 of the Office Action, Claim 19 – 21 were rejected as being 10 indefinite. Applicant has herein amended Claim 19 so that it now reads in relevant part:

15 “...said inductance characteristic comprises an inductance value associated with an “on-hook” current which is substantially larger than the inductance value associated with an “off-hook” current, said on-hook and off-hook inductance values being substantially constant as a function of their respective ones of said currents.”

Support for the aforementioned amendment can be found, *inter alia*, at page 11, lines 14 – 21 of 20 Applicant’s specification as filed. Applicant submits the aforementioned amendment overcomes the indefiniteness rejection of independent Claim 19 and the claims depending directly and indirectly therefrom, i.e. Claims 20 and 21 and hence respectfully requests the rejection be withdrawn.

Claim 32 – Per page 3 of the Office Action, Claim 32 was rejected as requiring additional 25 clarity structure/arrangement of the second insulating coating. Applicant has herein amended Claim 32 to delete reference to the coating covering at least a portion of the device, thereby making the placement of the recited second coating clear and unequivocal. One exemplary embodiment of such a secondary coating is shown in Fig. 16b, discussed above, although this embodiment is in no way limiting on the scope of Claim 32.

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§102 Rejections

Per page 3 of the Office Action, Claims 1 – 2, 5, 10 and 36 – 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Aldridge et al. (U.S. Patent No. 4,199,744, hereinafter “Aldridge”).

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Claim 1 – Independent Claim 1 has been amended herein so that it now recites, *inter alia*, a U-shaped magnetically permeable element disposed so that the radius of the U-shape is oriented towards the center of the magnetically permeable core. Support for this amendment can be found, *inter alia*, Fig. 14 and its accompanying disclosure. Applicant submits that Aldridge 10 does not teach or suggest all the features of Claim 1 as amended herein.

Claim 10 – Applicant has amended independent Claim 10 herein so that it now recites a desired inductance characteristic for the device provided by movably positioning the recited means for magnetically bridging within the gap. Support for Applicant’s amendment can be 15 found, *inter alia*, at page 32, lines 15 – 18 of the Applicant’s specification as filed. Applicant submits that Aldridge does not teach or suggest all the features of Claim 10 as amended.

Claim 36 – Applicant has amended independent Claim 36 so that the recited thin sheet is, when folded, wider and taller than the respective dimensions of the gap. Support for this 20 amendment can be found at page 32, lines 16 – 21 of Applicant’s specification as filed. Applicant submits that Aldridge does not teach or suggest all the limitations of Claim 36 as amended herein.

Claim 37 – Applicant has amended independent Claim 37 so that it now recites “*an ultra-thin magnetically permeable element comprising a permalloy material having approximately 80% nickel...*” Support for Applicant’s amendment can be found at page 16, lines 25 24 – 26. While Aldridge teaches a 50% nickel – 50% iron material, this composition has a lower permeability than the material claimed by Applicant, and would not be suitable for Applicant’s invention as claimed. Applicant submits that Aldridge does not teach or suggest a Permalloy 30 material having about 80% nickel.

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§103 Rejections

Per page 4 of the Office Action, Claims 3-6, 19-21 and 38 were rejected under 35 U.S.C. 103(a) as being unpatentable over Aldridge et al. (U.S. Patent No. 4,199,744, hereinafter "Aldridge"). Claims 26-35 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hare (U.S. Patent No. 2,585,932, hereinafter "Hare") in view of Yoshimori et al. (U.S. Patent No. 6,512,438, "Yoshimori").

Claim 19 – Per page 4 of the Office Action, Claim 19 stands rejected as being unpatentable in view of Aldridge. Applicant has amended Claim 19 so that it now recites "*at least one magnetically permeable element comprising a permalloy material comprising approximately 80% nickel...*" Support for Applicant's amendment can be found at page 16, lines 24 – 26. While Aldridge teaches a 50% nickel – 50% iron material, this composition has a lower permeability than the material claimed by Applicant and would not be suitable for Applicant's invention as claimed. Applicant submits that Aldridge does not teach or suggest a Permalloy material having about 78% nickel.

Claim 26 – 35 – Applicant submits that the combination of Hare with Yoshimori as proposed by the Examiner is improper and *teaches away* from such combination, and would render the invention of Hare unsuitable for its intended purpose. Specifically, the Examiner states:

"It would have been obvious to one having ordinary skilled in the art at the time the invention was made to use insulating layer design of Yoshimori et al. in Hare et al. for the purpose of providing insulation."

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However, Hare states at Col. 1, lines 13 – 17:

30 *"This continual frictional contact between parts of the cores and the relatively rapidly traveling carrier is a source of noise and hence interferes with the purity of the reproduced signal. This is a disadvantage which is present in more or less degree in all magnetic sound recording systems now in use."*

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In other words, it appears that the Examiner is asserting that insulating the frictional contact between parts of the cores and the rapidly traveling (magnetic) carrier in Hare would have been obvious to one of ordinary skill. However, such use of insulation as suggested by the Examiner would interfere with the operation of the Hare invention, as Hare repeatedly contemplates thin and frictionless coatings (see e.g. Col. 2, lines 18 – 36). Applicant therefore submits that the two teachings would simply not be compatible to form the invention claimed by Applicant. Hence, Applicant respectfully submits that the Examiner should withdraw his rejection of Claims 26 – 35, as the cited references are simply not combinable to render Applicant's claimed inventions obvious, and in fact teach away from one another.

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New Claims

Applicant has herein added new Claims 39 – 41. Support for these new claims can be found in the specification as filed as follows:

- 15 **Claim 39** – Support for this claim can be found, *inter alia*, at page 33, lines 4 – 8.
 Claim 40 – Support for this claim can be found, *inter alia*, at page 32, lines 4 – 7.
 Claim 41 – Support for this claim can be found; *inter alia*, at Fig. 14b and its accompanying disclosure.

20 *Other Remarks*

Applicant hereby specifically reserves the right to prosecute claims of different or broader scope in a continuation or divisional application.

Applicant notes that any claim cancellations or additions made herein are made solely for the purposes of more clearly and particularly describing and claiming the invention and responding to the aforementioned restriction election, and not for purposes of overcoming art or for patentability. The Examiner should infer no (i) adoption of a position with respect to patentability, (ii) change in the Applicant's position with respect to any claim or subject matter of the invention, or (iii) acquiescence in any way to any position taken by the Examiner, based on such cancellations or additions.

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Furthermore, any remarks made with respect to a given claim or claims are limited solely to such claim or claims.

If the Examiner has any questions or comments which may be resolved over the telephone, he is requested to call the undersigned at (858) 675-1670.

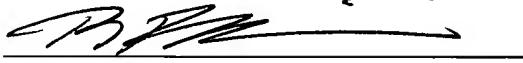
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Respectfully submitted,

GAZDZINSKI & ASSOCIATES

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